66963
SOV/183-59-5-5/28

15.5540
~~5(3)~~

AUTHORS: Sheyn, T. I., Topchibasheva, V. N.

TITLE: Depolymerization of Polyamides on the Basis of ω-Aminocarboxylic Acids in the Presence of Alkaline Catalysts

PERIODICAL: Khimicheskiye volokna, 1959, Nr 5, pp 21-24 (USSR)

ABSTRACT: The authors depolymerized polyamide resins produced from aminoenanthic, aminopelargonic, and aminoundecanic acids. 5 to 20 grams of the respective resin were heated in nitrogen atmosphere with the addition of a corresponding amount of catalyst, and the resulting cleavage products were distilled off in the vacuum. The cleavage products were purified and identified on the basis of their melting points, or the polymers which can be produced from them, respectively. It was shown that such a depolymerization mainly produces monomeric, 8-12 membered (depending on the size of the basic molecule of the initial polymer) cycles - lactams - whereas only few cyclic dimers are formed (Table 1). In the USSR, the production of fibers from the polymerization product of aminoenanthic acid was started on an experimental scale. Therefore depolymerization of this synthetic material with the production of lactam of the monomer is im-

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Depolymerization of Polyamides on the Basis of ω-Aminocarboxylic Acids in the Presence of Alkaline Catalysts

portant for the regeneration of oxidized and contaminated production waste. For this reason, further investigations only dealt with this substance. It was shown that among the alkaline catalysts used (anhydrous soda, soda produced by heating sodium bicarbonate, a lactam compound produced from dry caprolactam and metallic sodium, solid sodium hydroxide, solid potassium hydroxide) KOH in a quantity of 1-1.5% of the resin amount employed, and NaOH in a quantity of 5%, are most efficient. The sodium compound of caprolactam is much less efficient; an increase of its quantity to 3-4% produces undesirable side reactions. Therefore, further investigations were carried out with a corresponding percentage of KOH or NaOH as catalysts, respectively. The observation of the influence of temperature on the depolymerization showed that at a pressure of 5-7 mm Hg a temperature increase from 290 to 340°C causes no considerable increase in yield, but accelerates the reaction considerably (Table 3). Temperatures above 340°C reduce the quality of the lactam obtained. It was shown that a change in pressure in the reaction exerts a great influence on the final product. Thus,

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an increase in pressure from 4 to 18 mm Hg reduces the lactam yield from 77 to 30%, and increases the content of dimeric (16-membered) lactam from 2 to 35%. Purification of the lactam obtained from aminoenanthic acid is done by distillation over concentrated sulfuric acid. There are 3 tables and 8 references, 1 of which is Soviet.

ASSOCIATION: VNIIV

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5.3932

67...

SOV/20-129-5-26/64

AUTHORS: Petrov, A. D., Corresponding Member, AS USSR, Freydlin, L. Kh., Kudryavtsev, [illegible], Sladkova, T. A., Vdovin, V. M., Sheyn, T. I.

TITLE: Catalytic Hydrogenation of Silicon-containing γ-nitriles and the Fiber-forming Properties of Polyamides, Obtained From the Amines Produced Thereby

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 5, pp 1064 - 1067 (USSR)

ABSTRACT: The hydrogenation mentioned in the title has been hitherto little investigated (Refs 1,2). By the investigation under review, the authors succeeded in producing amides hitherto not described in publications. Polyamides (with a siloxane group) obtained on the basis of dicarboxylic acids of the aliphatic series are known to exhibit caoutchouc-like properties in a number of cases (Ref 3). The condensation of aromatic dicarboxylic acids (with a siloxane group) with hexamethylene diamine yields fiber-forming polyamides (Ref 1). In both cases the siloxane group in the dicarboxylic acids effects the melting temperature of the polyamides obtained

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therefrom to be reduced. The authors intended to investigate the properties of polyamides produced by using the silicon-containing diamines prepared by themselves. As was to be expected from data contained in publications, the fiber-forming polyamides can be produced solely by condensation of the said diamines with aromatic acids. The authors therefore used diamine salts and terephthalic acid for their experiments. The silicon-containing γ-dinitriles: $[NC(CH_2)_3-Si(CH_3)_2]_2O$, $[NC(CH_2)_3-Si(CH_3)(C_2H_5)]_2O$ and $[NC(CH_2)_3-Si(C_2H_5)_2]_2O$ were obtained by hydrolysis of the γ-cyano-propyl-dialkyl-chlorosilanes (Ref 4). $NC.CH_2.CH_2.CH_2-Si(CH_3)_2CH_3$ was obtained from a mixture of $NC.CH_2.CH_2.CH_2Si(CH_3)Cl$ (120 g) and anhydrous pyridine (104 g) in anhydrous ether (800 ml) on cooling with ice water and on adding 40 g of absolute methanol during 1 h of vigorous stirring. This substance has not yet been described in publications. The nitriles were hydrogenated in

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a rotating steel autoclave with nickel skeleton catalyst and ammonia. The amine fraction was readily distilled by fractionating the catalyzate. Its degree of purity was 97-100% (Table 1). Table 1 also specifies the experimental conditions and yields. Table 2 supplies the constants of amines and their derivatives. In this manner the following symmetrical di(δ-amino-butyl)-tetra-alkyl disiloxanes were produced: I) (see Scheme) along with its salt with terephthalic acid ($C_{12}H_{32}Si_2N_2O.C_8H_6O_2$); II) (see Scheme) together with its salt with terephthalic acid ($C_{14}H_{36}Si_2N_2OC_8H_6O_2$); III) (see Scheme) together with its salt with terephthalic acid ($C_{16}H_{40}Si_2N_2OC_8H_6O_2$). The yield drops with the prolongation of the lateral alkyl groups and is in I -92%, II - 87%, III - 70%. Table 2 shows the constants of the amines and their salts with terephthalic acid. The yield of the salts was 80-85%. All amines obtained are colorless clear liquids, non-soluble in water (they form an emulsion), soluble in 50% alcohol. The polyamides were obtained by

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heating (polycondensation) of the produced salts in nitrogen atmosphere. They are pale-yellow, horny, elastic, transparent resins of amorphous structure, well soluble in cresol and concentrated H_2SO_4. They swell in hydrochloric and formic acid, but do not solve. Table 3 shows the conditions of polycondensation. All these polyamides, when melted, yield fibers, which are dilatable by 300-400% at low temperature. The stability of the fibers is not very high. The results obtained confirmed that the substitution of methyl radicals on the silicon atom by ethyl radicals causes the polyamide melting temperature to drop. The siloxane group in the principal chain increases the flexibility and elasticity (like the oxygen atoms). There are 2 tables and 6 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR). Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Scientific Research Institute of Synthetic Fibers)

Card 4/5

S/183/60/000/005/002/007
B005/B054

AUTHORS: Sheyn, T. I., Kudryavtsev, G. I., Vlasova, L. N.

TITLE: Study of Alkaline Hydrolysis of Adipic and Sebacic Acid Chlorides

PERIODICAL: Khimicheskiye volokna, 1960, No. 5, pp. 13-15

TEXT: In connection with the new procedure of interfacial polycondensation of organic compounds, which is based on the Schotten - Baumann reaction (Ref. 1), the authors studied the kinetics of alkaline hydrolysis of adipic and sebacic acid chlorides in benzene and chloro benzene as solvents at different temperatures. Alkaline saponification of the two acid chlorides proceeds according to the reaction scheme: $ClOC(CH_2)_nCOCl + 4\ NaOH \longrightarrow 2\ NaCl + NaOOC(CH_2)_nCOONa$. The degree of hydrolysis was determined from the amount of lye consumed. The authors developed the following method of investigating the hydrolysis of adipic and sebacic acid chlorides: The weighed portion of the acid chloride was dissolved in dry benzene or chloro benzene to a 3% solution (% by weight). 10 ml of this solution was added from a pipette to exactly 40 ml of

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Study of Alkaline Hydrolysis of Adipic and
Sebacic Acid Chlorides

S/183/60/000/005/002/007
B005/B054

0.445 N potash lye under continuous mixing. The reaction vessel containing the lye had been put 15-20 min before into a thermostat whose temperature could be adjusted with an accuracy of ±0.05°C. The resulting reaction mixture was continuously mixed in the thermostat at constant velocity during the period of investigation. After this period, the mixing was stopped, and the separation of the two liquid phases was waited for, which did not take longer than 20 sec. Samples of 10 ml each were quickly taken from the alkaline aqueous layer, and titrated with 0.1 N sulfuric acid. Phenolphthalein was used as indicator. Preliminary tests had shown that under these conditions the analytical error did not exceed 0.1-0.2%. Hydrolysis of adipic and sebacic acid chlorides was studied by the above-described method at 20°, 30°, and 50°C. Three tables and a figure lead to the following conclusions: 1) Hydrolysis of sebacic acid chloride is much slower than saponification of adipic acid chloride. While complete hydrolysis of adipic acid chloride at 30°C takes 60 min, sebacic acid chloride hydrolyzes only at 26-28% in the same time. The lower saponification rate is probably due to the lower water solubility of sebacic acid chloride. 2) A temperature increase accelerates hydrolysis of the two acid chlorides. 3) The hydrolysis rate of the acid chlorides depends, to a certain extent, on the

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Study of Alkaline Hydrolysis of Adipic and Sebacic Acid Chlorides

S/183/60/000/005/002/007
B005/B054

solvent used. The hydrolysis rate of adipic acid chloride in chloro benzene is higher than in benzene, probably due to different distribution coefficients of adipic acid chloride between the aqueous and the organic phase. The authors determined the effective activation energy of hydrolysis of the two acid chlorides in the multiphase system by determining the maximum reaction rates obtained by differentiation of the curves in a diagram showing the amount of hydrolyzed substance as a function of time (Table 4, Fig. 2). The activation energies of hydrolysis of the two acid chlorides are almost equal. They are 11500 cal/mole (adipic acid chloride) and 10580 cal/mole (sebacic acid chloride). The results obtained confirm the assumption that the difference in saponification rate of the two dicarboxylic acid chlorides investigated is mainly due to the difference in distribution coefficients and, thus, in solubilities. The present paper is the first report on interfacial polycondensation. There are 2 figures, 4 tables, and 9 non-Soviet references.

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

Card 3/3

27496
S/062/61/000/009/012/014
B117/B101

155540 2205 1303, 1436

AUTHORS: Freydlin, L. Kh., Sladkova, T. A., Kudryavtsev, G. I., Sheyn, T. I., Zil'berman, Ye. N., and Fedorova, R. G.

TITLE: Catalytic hydrogenation of aromatic nitriles and the properties of polyamides obtained from p-(β,β'-diamino-diethyl) benzene

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 9, 1961, 1713-1715

TEXT: The hydrogenation of p-phenylene diacetondinitrile to give p-(β,β'-diamino-ethyl) benzene: $NC-CH_2-C_6H_4CH_2CN \rightarrow H_2N-C_2H_4-C_6H_4-C_2H_4-NH_2$ and the properties of the polyamides based on this diamine were studied. The p-phenylene diacetodinitrile (m.p. 95°-97°C) was prepared from acetone cyanohydride and p-xylylene dibromide. Hydrogenation was carried out at 100°-105°C and an initial hydrogen pressure of 100 atm in a rotating autoclave of 0.175 liter capacity. Dioxane, methyl alcohol, or ethyl alcohol containing some ammonia were used as mediums. The catalysts were prepared by exhaustively

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Catalytic hydrogenation of ... S/062/61/000/009/012/014
B117/B101

leaching powdered 50% nickel-aluminum- and cobalt-aluminum alloys with 10% aqueous NaOH solution. The catalysts were then washed with water up to neutral reaction against phenolphthalein. Cobalt skeleton catalyst leached with 25-30% aqueous alkali solution at maximally 15°C (Ref. 5: see below) was used in some experiments. Diamine yields are strongly influenced by the nature of the catalyst and its preparation method. The yield is 64-65% in the case of nickel skeleton catalyst, 74% with cobalt skeleton catalyst leached at 90°-100°C, and 94% with catalyst prepared by "cold leaching". The authors also studied the polycondensation of p-(β,β'-diamino-diethyl) benzene with adipic acid and terephthalic acid. Addition of acetone to an equimolar mixture of aqueous diamine- and adipic acid solutions precipitates the salt. This salt is crystallized twice from water, yielding a white crystalline substance, m.p. 200°-202°C ($C_{16}H_{26}N_2O_4$). The polyamide was obtained by polycondensation of this salt at 260°-280°C. Polycondensation occurs in the solid phase below the melting point of the polyamide. This polyamide based on p-(β,β'-diamino-diethyl) benzene and adipic acid was also prepared at 20°C by heterophase polycondensation: reaction between the aqueous diamine solution (with sodium carbonate added) and adipic chloride in benzene. Polyamides were

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B117/B101

also prepared in an analogous manner by reaction of terephthalic- and sebacic chlorides in methylene chloride with aqueous diamine solutions containing alkali to bind the hydrochloric acid formed, according to the method by P. W. Morgan (Ref. 8, see below). In all experiments, polycondensation of adipic acid with the diamine under investigation yielded a polyamide having a melting point of 314°-320°C. It is soluble in concentrated H_2SO_4, cresol, formic acid, hydrochloric acid, and insoluble in organic solvents. Polyamides of higher mol wt. are obtained by increasing the reaction temperature and reaction time. The relative viscosity of these polyamides in concentrated H_2SO_4 is increased from 1.73 to 2.69. By spinning these high-molecular polyamides from their melts at 335°-340°C fibers capable of orientation at high temperatures were obtained. The polymer properties are also affected by the purity of the amino salt used. If the salt is only recrystallized once, colored polyamides of lower molecular weight are formed. There are 2 tables and 8 references: 3 Soviet and 5 non-Soviet. The four most recent references to English-language publications read as follows: F. G. Lum, E. F. Carlston, Industr. and Engng Chem. 44, 1595 (1952); E. F. Carlston, F. G. Lum,

X

27496
S/062/61/000/009/012/014
B117/B101

Catalytic hydrogenation of ...

X

Industr. and Engng Chem. 49, 1239 (1957); Ref. 5: B. V. Aller, J. Appl. Chem. 7, 130 (1957); Ref. 8: P. W. Morgan, SPE-Journal 15, 485 (1959).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR); Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Scientific Research Institute of Synthetic Fibers)

SUBMITTED: March 28, 1961

Card 4/4

FREYLLIN, L.Kh.; SLADKOVA, T.A.; KUDRYAVTSEV, G.I.; SHEYN, T.I.; AIL'BERMAN,
Ye.N.; FEDOROVA, R.G.

Catalytic hydrogenation of aromatic nitriles and the properties of polyamides obtained from p-(β,β'-diaminodiethylbenzene). Izv. AN SSSR. Otd.khim.nauk no.9:1713-1715 S '61. (MIRA 14:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.
(Nitriles) (Hydrogenation) (Polyamides)

S/183/63/000/001/001/004
B101/B186

AUTHORS: Sheyn, T. I., Katorzhnov, N. D., Kudryavtsev, G. I.

TITLE: Fractional composition of polyamides synthesized at an interface under static conditions

PERIODICAL: Khimicheskiye volokna, no. 1, 1963, 17-19

TEXT: A film formed at the interface of sebacyl dichloride dissolved in chloro benzene and hexamethylene diamine dissolved in water containing $NaHCO_3$. This was drawn out without mixing the solutions, and its fractional composition was tested. Polymers with a degree of polymerization (DP) between 87 and 143 were obtained by changing the concentration of the sebacyl dichloride from 8 to 10% by weight, and that of the hexamethylene diamine from 1 to 5% by weight. Comparison with the fractional composition of polycaprolactam polymerized in the melt showed that the DP covers a wider range on interfacial polymerization than on melt polymerization, but the fractions with a DP of 50-200 predominate in both polymers. The interfacially polymerized polymer is characterized by fractions with DP up to 600, but the content of highly polymerized

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S/183/63/000/001/001/004
Fractional composition of polyamides... B101/B186

fraction (DP>200) is only 18-19%. The maximum on the differential curve lies at lower DP for the interfacial polymer than for polycaprolactam. Similar results were obtained by comparing the interfacial polymer with polyhexamethylene adipic amide produced by thermal polymerization of AH salt. Polyhexamethylene adipic amide had an average DP of 184 with a maximum at DP=105, while the respective values for the interfacial polymer were 143 and 75. Conclusion: Interfacial polymerization at first proceeds irreversibly at a rate corresponding to the range of ionic reactions, so that no secondary reactions occur. After formation of a monomolecular layer, the rate of polymerization depends on monomer diffusion through the layer. Due to the changes in concentration, the rate of diffusion finally becomes commensurate with the rate of termination. The polymer chains formed in the last stage therefore differ from those formed initially. There are 2 figures.

ASSOCIATION: VNIIV

SUBMITTED: March 4, 1962

Card 2/2

S/183/63/000/002/003/003
A051/A126

AUTHORS: Sheyn, T.I., Oroshkina, T.S., Vlasova, L.N., Kiriyenko, I.B.

TITLE: A study of enanthic fiber tensility increase

PERIODICAL: Khimicheskiye volokna, no. 2, 1963, 22 - 24

TEXT: The effect of the aminoenanthic acid quality on the properties of cord enanthic fiber No. 345 was investigated. Two major possibilities of enanth tensility increase were studied: improvement of the initial monomer quality for the production of the enanthic resin, and an increase of the resin molecular weight. Experimental batches of aminoenanthic acid of first and improved qualities, produced on an experimental stand at the electrolysis plant, were used for the investigation. The fiber formation was accomplished on a spinning mill for experimental production at the Klin Combine. It was shown that an elevation of the initial raw material properties leads to an increase of fiber tensility (by 6 - 7 rkm), and of all the physico-mechanical properties as well. The thermo-stability of the resin was studied at 290 and 340°C. It was shown that at 340°C and heating for 60 min, a destruction occurs of the enanthic resin having

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A study of enanthic fiber tensility increase

S/183/63/000/002/003/003
A051/A126

a high molecular weight. An increase of the molecular weight of the enanthic resin, under the existing design of the spinning bobbins necessitates a sharp increase of the formation temperature (up to 340 - 350°C) for resins with a specific viscosity of 0.92 - 1.10, or a change of the bobbin design, namely, by using a screw conveyer type. The relation between the formation temperature and viscosity of the initial enanthic resin was also investigated and it was seen that the use of resin having a high specific viscosity is not recommended for fiber formation on the existing fiber-manufacturing machinery. It was shown that the addition of NN'-di- ββ'naphthylparaphenylenediamine thermostabilizer sharply increases the resin destruction resistance at 340 °C. A change in the resin formation conditions, such as the use of masticators or new bobbins, would change the demands placed on the resin. There are 5 tables.

ASSOCIATION: VNIIV and Klinskiy kombinat (Klin Combine) - (Kiriyenko)

SUBMITTED: March 24, 1962

Card 2/2

SHEYN, T.I.; VLASOVA, L.N.

Polymerization of dodecalactam. Vysokom. soed. 5 no.10:
1468-1472 O '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

SHEYN, T.I., nauchnyy sotrudnik; LYUBIMTSEVA, G.P., nauchnyy sotrudnik

Effect of loads at high temperatures on the characteristics of enant fibers. Tekst.prom. 23 no.11:90-94 N '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

L 43389-65 EWP(j)/EWT(m)/T Pc-4 RM UR/0286/65/000/007/0090/0090

ACCESSION NR: AP5010900

AUTHORS: Sheyn, T. I.; Kudryavtsev, G. I.; Fedorova, R. G.; Kislova, T. I.

TITLE: A method for obtaining polyamide fiber. Class 29, No. 169741

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 90

TOPIC TAGS: synthetic fiber, polyamide, xylylene, adipic acid

ABSTRACT: This Author Certificate presents a method for obtaining polyamide fiber on the base of n- and m-xylylenediamine and adipic acid. To increase the thermal stability of the fiber, the salts of n-xylylenediamine and adipic acid undergo polycondensation with an addition of 5-20% of m-xylylenediamine salt and adipic acid in a solid state at a temperature 40-60C below the melting temperature of the obtained polyamide. This process is conducted in the presence of a thermostabilizer or a plasticizer and is followed by forming the fiber in the usual manner.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Scientific Research Institute of Synthetic Fibers)

Card 1/2

L 43889-65

ACCESSION NR: AP5010900

0

SUBMITTED: 11Apr64

ENCL: 00

SUB CODE: OC, MT

NO REF SOV: 000

OTHER: 000

Card 2/2

SHEYN, T.I.

International exhibition of "Chemistry in industry, construction, and agriculture." Khim. volok. no.6:74-75 '65.
(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

L 00751-66 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) RPL RM

ACCESSION NR: AP5020973 UR/0190/65/007/008/1447/1451 52

44,55 44,55 44,55 29

AUTHOR: Sheyn, T. I.; Kudryavtsev, G. I.; Lyubimtseva, G. P. B

15,44,55

TITLE: Synthesis and investigation of fiber-forming polyamide based on 1,4-cyclohexane-bis-methylamine

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1447-1451

TOPIC TAGS: synthetic fiber, polyamide, adipic acid, polycondensation, caprone

ABSTRACT: Conditions for the synthesis and some properties of fiber-forming polyamides from 1,4-cyclohexane-bis-methylamine(I) and adipic acid (II) were determined. Two-stage polycondensation proved suitable: a prepolymer was made by preliminary polycondensation of equimolar amounts of I and II in a sealed container under a nitrogen atmosphere, after which the container was opened and the polycondensation completed. A temperature of 280C for the solid phase polycondensation resulted in a polyamide suitable for fiber drawing. 260C was too low, unless a plasticizer (o-hydroxydiphenyl) was incorporated, in which case the

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ACCESSION NR: AP5020973 25

elastic polymer could also be drawn. The addition of a thermostabilizer (di-β-naphthyl-p-phenylenediamine) had little effect on the final polycondensation rate but gave products with high molecular weights. Physico-mechanical, physico chemical and thermo mechanical properties of polyamide fibers made under mod-el conditions were determined. The fibers made from I and II were superior to those of capron—the melting temperature was higher (341-342C) and the modulus of elasticity and the thermomechanical properties were better. "The trans-TsGMA (1,4-cyclohexane-bis-methylamine) we used was synthesized first in the IOKh AN SSSR 44,55 laboratory by L. Kh. Freydlin 44,55 and T. A. Sladkov 44,55 and then by M. I. Yakushkin 44,55 and L. I. Gal'perin 44,55 in the VNIINeftekhimicheskikh protsessov 44,55 and was kindly supplied to us for investigation." Orig. art. has: 2 tables and 3 figures

ASSOCIATION: Vsecoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna(All-State Scientific Research Institute of Artificial Fiber) 44,55

SUBMITTED: 02Oct64 ENCL: 00 SUB CODE: MT, GC

NR REF SOV: 007 OTHER: 002

Card 2/2 BP

SHEYN, T.V.

Remote-controlled bucket unit used in feeding concrete mixes. Rats. i izobr. predl. v stroi. no.3:11-14 '57. (MIRA 11:1)
(Concrete) (Remote control)

SHEYN, T.V., inzh.

New crane or hoist for assembling high-voltage electric lines.
Mont.i spets.rab.v stroi. 23 no.8:15-18 Ag '61. (MIRA 14:8)

1. TSentral'noye proyektno-konstruktorskoye byuro Tresta
Elektromontazhkonstruktsiya.
(Cranes, derricks, etc.) (Electric lines--Overhead)

POGOSOV, G.S.; SAKHAROVA, D.D.; SHEYN, TS.YA.

[Manual for the solution of problems in theoretical mechanics] Posobie po resheniiu zadach teoreticheskoi mekhaniki. Moskva, 1963. Sec.1.[Statics) Statika. 49 p. Sec.2. [Kinematics] Kinematika. 71 p. (MIRA 16:11)
(Mechanics, Analytic--Problems, exercises, etc.)

SHEYN, U.

Heavy-duty cranes in the assembly of chemical enterprises. Na stroi. Ros. 4 no.5:10 My '63. (MIRA 16:5)

1. Glavnyy inzh. tresta Vostoktyazhstroy.
(Chemical plants--Design and construction)
(Cranes, derricks, etc.)

100-9-8/11

Pneumatic Delivery of Concrete During the Erection of the Irkutsk Cement Factory

the rate of agitation should be increased (of the concrete mixer) and the transmission shaft should be strengthened. The vibrators И-7 and И-8 should be reconstructed so that large lumps cannot enter the suction duct. A separate washing device should be attached as the cleaning of the ducts carrying the concrete is very troublesome. The suction plant KCM-50 is used for cleaning, at present. The bunker-capacity should be increased as it is insufficient and does not correspond to the capacity of the automatic loading machine ЗИГ-150.

AVAILABLE: Library of Congress

Card 2/2

1. Construction-Equipment 2. Concrete-Handling 3. Pneumatic conveyors-Applications 4. Concrete mixers-Applications

SHEYN, V.B.

Abst Journal: Referat Zhur - Mekhanika, No 3, 1957, 3205

Author: Shein, V. B.

Institution: None

Title: Convective Phenomena in the Evaporation of Water from Vertical Tubes

Original Periodical: Uch. zap. Molotovsk. un-ta, 1955, 9, No 4, 85-92

Abstract: By measuring the speed of evaporation of the water and the distribution of the air humidity inside the tube it is shown that depending on the tube diameter and on the liquid level, the steam is carried away from the tube to the outside space either by diffusion or by convection.

To explain the results obtained, the author employs the analogue of this phenomenon with the thermogravitational convection in a vertical tube filled with water and heated from below. The latter case

Card 1/2

Abst Journal: Referat Zhur - Mekhanika, No 3, 1957, 3205

Abstract: was studied in detail by G. A. Ostroumov (Svobodnaya konvektsiya v usloviyakh vnutrenney zadachi /Free Convection Under Conditions of the Internal Problem/, Gostekhizdat, 1952).

Card 2/2

SOV/3-58-12-25/43

AUTHOR: Sheyn, V.B., Candidate of Physico-Mathematical Sciences

TITLE: A Device for Demonstrating **Transient Processes of Hydrodynamic Operating Conditions** (Ustroystvo dlya demonstratsii perekhoda gidrodinamicheskikh rezhimov)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 12, pp 73 - 74 (USSR)

ABSTRACT: The problem of the changing hydrodynamical processes plays a great role in the mechanics of liquids, and it is therefore of importance that the students become familiar with it. The Chair of Physics of the Perm' Medical Institute has made a simple experimental device to demonstrate the transition of hydro-dynamical processes and to give a typical picture of the laminar and turbulent flow of liquid. The basic part of the device is a transparent tube of 3 - 4 mm inner diameter and 7 - 10 cm in length. The ends of the tube are connected with 2 containers of about 300 cu cm capacity each. Container Nr 2 has 2 holes: one for filling and the other leads to the draining tube. The device may be fastened to a support. One container is filled with a 10 percent solution of sugar, colored with methyl orange. A few miligrams of aluminum powder are added. The other

Card 1/2

SHEYN, V.B.

Experiments on convection conducted in institutes of higher education. Izv.vys.ucheb.zav.; fiz. no.3:171-173 '61. (MIRA 14:8)

1. Permskiy gosudarstvennyy meditsinskiy institut.
(HEAT—CONVECTION)

SHEYN, V.B.

Convective processes in the evaporation of water from vertical cylindrical hollows. Inzh.-fiz.zhur. 5 no.1:52-54 Ja '62. (MIRA 15:3)

1. Meditsinskiy institut, Perm'.
(Heat--Convection) (Evaporation)

SHEYN, V.D.

5(1) PHASE I BOOK EXPLOITATION SOV/2927

Yaroslavl'. Tekhnologicheskiy institut

Uchenyye zapiski, Tom II (Scientific Notes, Vol. 2) [illegible] copies printed.
Yaroslavl'. [illegible]

[illegible]

Editorial Staff: A.I. Zaikina, Candidate of Historical Sciences; Docent M.M. Makarov, Candidate of Technical Sciences; Professor M.I. Farberov, Doctor of Technical Sciences;

Resp. Ed.: Professor Yu.S. Musabekov, Doctor of Chemical Sciences

Secretary-Scientist: B.F. Ustavshchikov, Candidate of Chemical Sciences

PURPOSE: This book is primarily intended for industrial chemists and technologists interested in the kinetics of chemical reactions and their related physical processes.

COVERAGE: The twenty-two articles of this collection deal mainly with industrial processes for the preparation of organic compounds, problems of heat physics and general mechanics related to these processes, and with industrial chemical equipment. No personalities are mentioned. References are given after each article.

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2/

SHEYN, V.S.

Geology of the Karatepe region and its oil and gas potentials.
Neftegaz. geol. i geofiz. no.4:16-19 '65. (MIRA 18:7)

1. Glavnoye upravleniye geologii i okhrany nedr pri Sovete
Ministrov UzSSR.

ITSIKSON, M.I.; PROKOF'YEV, A.P.; SHEYN, V.Z.; TIMOFEYEVSKAYA, G.V.

Genetic features of the Lesser Khingan Range tin-bearing region. Sov.geol. no.14-15:43-57 '47. (MLRA 8:8)
(Khingan Range, Lesser--Tin ores)

SHEYN, Ya.

New nickel enterprise [from "Engineering and Mining Journal" no.12, 1959]. TSvet. met. 33 no.9:91-94 S '60. (MIRA 13:10)
(United States--Nickel) (Cuba--Nickel)

SHEYN, Ya.

Nickel production in New Caledonia [from reports made at the French National Exhibition in Moscow]. TSvet. met. 34 no.12: 94-95 D '61. (MIRA 14:12)
(New Caledonia--Nickel industry)

SHEYN, Ya.

All-Union conference on ways for further technical progress in the production of nickel. TSvet. met. 37 no.10:82-86 O '64. (MIRA 18:7)

SHEYN, Ya.; GUDIMA, N.V.

Readers are continuing to discuss the work of the "TSvetnye Metally" journal. TSvet. met. 36 no.6:91-93 Je '63. (MIRA 16:7)

(Nonferrous metals—Periodicals)

BELYAYEV, Dmitriy Vasil'yevich; VORONKOV, N.A., inzh., retsenzent;
UZHEVSKIY, G.S., inzh., retsenzent; SHEYN, Ya.P., inzh.,
red.; EL'KIND, L.M., red.izd-va; KARASEV, A.I., tekhn.red.

[Metallurgy of tin; manual for the training of qualified workers in industry] Metallurgiia olova; uchebnik dlia podgotovki kvalifitsirovannykh rabochikh na proizvodstve. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 94 p. (MIRA 13:5)

(Tin--Metallurgy)

SKOROV, V.A.; STEPANOV, I.S.; SHAKHNAZAROV, A.K., inzhener-metallurg, pensioner; PETROV, V.I., Geroy Sotsialisticheskogo Truda; BARYSHNIKOV, I.F., starshiy inzhener; BUGAREV, L.A.; LAKERNIK, M.M., kand.tekhn. nauk; SHEYN, Ya.P.; MOLCHANOV, A.A.

The greatest objective of our life. TSvet.met. 34 no.10:1-10 O '61. (MIRA 14:10)

1. Glavnyy inzhener Skopinskogo zavoda "TSvetmet" (for Skorov). 2. Zamestitel' predsedatelya Mezhduvedomstvennoy komissii po redkim metallam pri Gosudarstvennom komitete Soveta Ministrov SSSR po koordinatsii nauchno-issledovatel'skikh rabot (for Stepanov). 3. Rukovoditel' brigady kommunisticheskogo truda elektroliznogo tsekha. Ural'skogo alyuminiyevogo zavoda (for Petrov). 4. Otdel tsvetnoy metallurgii Gosplana SSSR (for Baryshnikov.). 5. Nachal'nik podotdela otdela ekonomiki i razvitiya tsvetnoy metallurgii Gosekonomsoveta SSSR (for Bugarev). 6. Zamestitel' direktora po nauchnoy chasti Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov (for Lakernik). 7. Starshiy ekspert upravleniya Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (for Sheyn). 8. Glavnyy spetsialist otdela tsvetnoy metallurgii Gosplana SSSR (for Molchanov). (Communism)

SHEYN, Ya.P.

All-Union conference on the use of oxygen in nonferrous metallurgy.
TSvet. met. 36 no.5:85-90 My '63. (MIRA 16:10)

SHEYN, Yakov Petrovich; GUDIMA, Nikolay Vasil'yevich. Prinimal uchastiye ROZLOVSKIY, A.A.; VANYUKOV, A.V., prof.

[A metallurgist's brief handbook on nonferrous metals] Kratkii spravochnik metallurga po tsvetnym metallam. Moskva, Metallurgiia, 1964. 411 p. (MIRA 17:11)

[illegible], Ya. and [illegible], L.
Affections of the visual organ in plasmocid intoxication and its treatment
Vestnik Oftalmologii 1940, 17/6 (747-751)

5220 Description of ten cases of atrophy of the optic nerve after administration of plasmocid. The illness had started six months to three years previously. At the instigation of Filatov a combined treatment was applied, viz. intravenous injection of 10 per cent NaCl solution, instillations of pilocarpine in both eyes, and subcutaneous injections of caffeine. In nine cases the visual acuity improved considerably, and the scotomata diminished in size and disapeared in some cases. It is an interesting fact that results were obtained even in cases where intoxication had occured a long time previously.

Kalfus-Odessa (Sec. XII)

SO: Section II Vol. 1^2 No. 7-12

SHEYN, Ya. S.

Sheyn, Ya. S. -- "Consequences of infantile eye traumata on he basis of dispensary data over 12 years," Oftalmol. zhurnal, 1949, No. 2, p. 62-67

SO: u-5241, 17 December 1953, (Letopis 'zhurnal 'nykh Statey, No. 26, 1949).

SHEYN, Ye. M.

Mor., Inst. Chemistry, Gor'kiy State Univ., -c1949-. "Activating the Carbon in Haloxylon," Priroda, No. 7, 1949; [Smolina, L. B.] "Electroreduction of Bromoacetic Acid and Bromoform on a Mercury-Drop Cathode," Zavod. Lab. No. 11, 1949. "Activating the Carbon from Some Species of Wood from Central Asia," ibid., [Smolina, L. B.] "Polarographic Determination of Halogen Derivatives," Dok. AN, 68, No. 6, 1949;

SHEYN, YE. M.

PA 63/49T12

USSR/Chemistry - Carbon, Active
Chemistry - Absorption

Jul 49

"Activating Carbon From Some Ligneous Rocks of Central Asia," L. B. Smolina, Ye. M. Sheyn, 1/6 p

"Priroda" No 7

Activated carbon manufactured from local Central Asian Wood has been little studied. Lab of Colloidal Chem, Tashkent Inst of Agr, has been conducting experiments in which such wood was exposed to steam at temperatures of 350 - 800° for 1 - 6 hours. Gives statistics for various sorts. Especially recommends "Karcha" for use in obtaining activated carbon as it is capable of absorbing 260 - 300 mg/g of iodine.

[redacted]

63/49T12

SHEYN, YE. M.

PA 63/49T13

USSR/Chemistry - Haloxylon
Chemistry - Carbon, Active

Jul 49

"Activating the Carbon in Haloxylon," L. B. Smolina, Ye. N. Sheyn, 1/6 p

"Priroda" No 7

Carbon from haloxylon can be used as an adsorbent in filters for purifying water. It is also used to extract certain binary salts, iodine and acids from aqueous solutions. Activated carbons obtained by a water-vapor method are capable of absorbing iodine (220 mg/g) and acids, but are less capable of absorbing alkalis, methylated alcohol, and chlorine gas.

63/49T13

FDD

1. IVANOV, A. A.; CHARKWIANI, K. M.; DIEV, N. P.; KOCHNEV, K. V.; SHEYNA, A G.; IORDAN,YE F; PAVLOV, F. N.

2. USSR (600)

4. Copper Mines and Mining

7. Preventing endogenous fires in copper pyrite mines.
IZV. AN SSSR. Otd. tekh. nauk no. 7, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

SHEYNA, A.K., dotsent

Using phthivazid in diseases of the liver and biliary tracts. Vrach. delo no.11:1149-1151 N '56. (MLRA 10:3)

1. Kafedra terapii (zaveduyushchiy - dotsent G.I.Burchinskiy) stomatologicheskogo fakul'teta Kiyevskogo meditsinskogo instituta na baze Pervoy podol'skoy bol'nitsy (glavnyy vrach - Ye.P.Baybova)
(ISONICOTINIC ACID) (BILIARY TRACT--DISEASES)
(LIVER--DISEASES)

SHTEIN, A. P.

"Comparative Experiments on the Lens-Forming Properties of the Body Epitheleum in Different Stages of Development in Rana Temporaria, Rana Esculenta, and Rana Arvalis," Dok. AN, 29, No. 1, 1940. Mbr., Dept. Organogenesis, Inst. Exptl. Morphogenesis, Moscow, Order Lenin State Univ. im. M. V. Lomonosov, -1940-.

[illegible], A. P.

"A Comparative Study of Lens-Forming Properties of Body Epithelium at Various Development Stages in Bombina Bombina and Amblystoma Mexic anum," Dok. AN, 44, No. 5, 1944.
Mor., Moscow Order Lenin State Univ. im. M. V. Lomonosov, -1944-.

VRAZHNOVA, K.M., zootekhnik; SHEYNA, A.Ye., zootekhnik

Pine needles as a source of vitamins for hens and chickens. (MIRA 12:1)
Ptitsevodstvo 9 no.1:42 Ja '59.

1. Kovylkinskiy ptitsesovkhoz Mordovskoy ASSR.
(Poultry--Feeding and feeding stuffs)

SOV-3-58-9-36/36

AUTHORS: Geyler, L.B., Professor, Doctor of Technical Sciences; Kuznetsov, B.V., and Mekhedko, F.V., **Docents**; Satsukevich, M.F. and Sheyna, G.P., Senior Instructors

TITLE: A Textbook on the Electrical Equipment of Metal Cutting Machine Tools (Uchebnik po elektricheskomu oborudovaniyu metallorezhushchikh stankov)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 9, pp 95-96 (USSR)

ABSTRACT: This is a review of the textbook by I.V. Kharizomenov "Electrical Equipment of Metal Cutting Machine Tools".

ASSOCIATION: Belorusskiy politekhnicheskiy institut imeni I.V. Stalina (Belorussian Polytechnical Institute imeni I.V. Stalin)

Card 1/1

S/143/62/000/003/005/007
D238/D302

AUTHORS: Ankhimyuk, V. L., Candidate of Technical Sciences, Docent, and Sheyna, G. P., Engineer

TITLE: Investigating a tachometer bridge employed as a velocity-type transducer

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, no. 3, 1962, 39-42

TEXT: The tachometer bridges employed in the control of industrial drives, whilst providing high-speed feedback combined with simplicity of design, are limited by the relative error, governed by the speed and the load on the drive. This factor lends importance to a knowledge of the conditions offering the least error over a wide range of speed measurement. It is demonstrated from the circuit equations that the minimum relative error must be sought for each speed of rotation by determining the most favorable bridge-arm ratio on the basis of the mathematical argument. Allowing a permiss-

Card 1/2

Investigating a tachometer ... S/143/62/000/003/005/007
D238/D302

ible error of 2 to 5%, tachometer bridges can be employed successfully on electric drives having an armature-voltage speed-regulation range within the limits of 1:3 - 1:4. The error rises sharply on low speeds in the order of 150 and 250 r.p.m. There are 4 figures.

✓

ASSOCIATION: Belorusskiy politekhnicheskiy institut (Belorussian Polytechnic Institute)

SUBMITTED: July 4, 1961

Card 2/2

KUZNETSOV, B.V.; MEKHEDKO, F.V.; SATSUKEVICH, M.F.; SHEYNA, G.P.;
KASHTANOV, F., red.; DOMOVSKAYA, G., tekhn. red.

[Electrical systems in homes] Elektroustanovki v domashnem bytu. Minsk, Gos izd-vo BSSR. Redaktsiia proizvodstvennoi lit-ry, 1962. 107 p. (Biblioteka elektromontera, no.5)
(MIRA 16:6)

(Household appliances, Electric)

SATSUKEVICH, Mikhail Fedorovich; MEKHEDKO, Fedor Vasil'yevich;
KUZNETSOV, Boris Vladimirovich; SHEYNA, Gennadiy Petrovich;
KASHTANOV, F., red.; YERMOLENKO, V., tekhn. red.

[Brief information on electrical engineering] Kratkie svedeniia iz elektrotekhniki. Minsk, Gos. izd-vo BSSR. Red. proizvodstvennoi lit-ry, 1962. 130 p. (Bibliotechka elektromontera, no.1) (MIRA 16:6)

(Electric engineering)

KUZNETSOV, B.V.; MEKHEDKC, F.V.; SATSUKEVICH, M.F.; SHEYNA, G.P.;
KASHTANOV, F., red.; NOVIKOVA, V., tekhn. red.

[Electric power distribution networks with voltages up to 1000 volts] Elektricheskie seti napriazheniem do 1 000 v. Minsk, Gos. izd-vo BSSR. Red. proizvodstvennoi lit-ry, 1962. 149 p. (Bibliotechka elektromontera, no.2) (MIRA 16:6)

(Electric power distribution)
(Electric lines--Overhead)

SHEYNA, Gennadiy Petrovich; KUZNETSOV, Boris Vladimirovich;
MEKHEDKO, Fedor Vasil'yevich; SATSUKEVICH, Mikhail
Fedorovich; KASHTANOV, F., red.; NOVIKOVA, V., tekhn. red.

[Electric measuring devices and metering of electric power]
Elektroizmeritel'nye pribory i uchet elektroenergii. Minsk,
Gos.izd-vo BSSR. Red. proizvodstvennoi lit-ry, 1963. 141 p.
(Bibliotechka elektromontera, no.3) (MIRA 16:6)
(Electric meters) (Electric measurements)

SATSUKEVICH, Mikhail Fedorovich; SHEYNA, Gennadiy Petrovich;
KOSHTANOV, F., red.; VARENIKOVA, V., tekhn. red.

[Electric equipment of machine tools] Elektrooborudovanie metallorezhushchikh stankov. Minsk, Izd-vo "Belarus'" 1963. 164 p. (Bibliotechka elektromontera, no.8) (MIRA 17:3)

ANKHIMYUK, V.L., kand.tekhn.nauk, dotsent; IL'IN, O.P., kand.tekhn.nauk, dotsent; SHEYNA, G.P., inzh.

Amplidyne amplifier as an element of an automatic control system. Izv. vys. ucheb. zav.; energ. 7 no.3:44-52 Mr '64. (MIRA 17:4)

1. Belorusskiy politekhnicheskiy institut. Predstavlena kafedroy elektricheskikh mashin i elektroprivoda.

L 05215-67 EWT(l)

ACC NR: AP7000765 SOURCE CODE: UR/0143/66/000/005/0040/0045

AUTHOR: Ankhimyuk, V. L. (Docent; Candidate of Technical Sciences); Il'in, O. P. (Docent; Candidate of Technical Sciences); Sheyna, G. P. (Engineer)

40
B

ORG: Belorussian Polytechnic Institute (Belorusskiy politekhnicheskiy institut)

TITLE: Selection of motors for electric drives with frequency control at constant power

24

SOURCE: IVUZ. Energetika, no. 5, 1966, 40-45

TOPIC TAGS: electric motor, frequency control

ABSTRACT: A method is analyzed for selecting a motor for a system of frequency controlled drive in the P_c=const operating regime. The method is based on the condition of production of a minimal size motor, in consideration of the problem of determining the frequencies at which the fixed range of control and power can be provided with series produced asynchronous motors. The authors call for development of technical conditions or state standards with respect to permissible values of voltage, current and rotation rate of series produced asynchronous motors used in frequency controlled electrical drive systems. An example of the calculation is presented. Orig. art. has: 19 formulas. [JPRS: 37,061]

SUB CODE: 09 / SUBM DATE: 17May65 / ORIG REF: 006

Card 1/1 gl UDC: 62-83-531.6

0923 1745

SHEINA, K.

SALGUS, P.; SHEYNA, K.

Ways to simplify accounting for labor and wages. Bukhg. uchet. 14 [i. e. 16] no.12:29-33 D '57. (MIRA 11:1)
(Accounting) (Wages)

BORISOV, T.; SHEYNA, K.

Concerning "basic principles of accounting for labor and wages at industrial enterprises." Sots. trud. no.8:142-147 Ag '58.
(MIRA 11:9)

(Accounting)

GOROKHOVA, D.; SHEYNA, K.

Potentialities in improving the utilization of working time. Biul. nauch. inform.: trud i zar. plata no.7:26-36 '59.
(MIRA 12:10)

(Moscow--Time study)

USSR / Cultivated Plants. Grains. Legumes. Tropical Cereals. M-1

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6222

Author : Shelna, K. S.
Inst : Voroshilovgrad Agricultural Institute
Title : Preliminary Results of the Study of Hybrids and of Corn Varieties

Orig Pub : Nauchn. zap. Voroshilovgradsk. s.-kh. in-ta, 1957, 4, No 2, 76-85

Abstract : 212 corn varieties of various origins, belonging to six subspecies were studied at the experimental farm of the Voroshilovgrad Agricultural Institute (low-bottom land of the Lugan' River) during 1955-1956. The description of conditions of growing of the collection, the detailed phenological observations, the yield of grain

Card 1/2

14

SHLYAKHTENKO, L.I.; SKOVORODNIKOVA, Ye.S.; BUNTE, A.I.; GUREVICH, L.M.;
BELOVA, I.V.; SHEYNA, N.N.

Detection and dispensary care of dysentery patients for the improvement of sanitary conditions in a large residential area. Trudy LSGMI 32:287-303 '57. (MIRA 12:8)

1. Kafedra epidemiologii (zav. - prof. V.A.Bashenin), kafedra propedevtiki vnutrennikh bolezney (zav. - prof. S.M.Ryss), kafedra mikrobiologii (zav. - prof. M.N.Fisher) i kafedra kommunal'noy gigiyeny (zav. - prof. P.K.Ageyev) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(DYSENTERY, BACILLARY, prev. & control
detection & dispensary serv. (Rus))
(OUTPATIENT SERVICES
for dysentery (Rus))

TISHCHENKO, D.; SHE$\overset{Y}{\text{I}}$NA, S.

New type of terpene transformations. XI. Action of chlorine on α-fenchene.
Zhur. Obshchey Khim. 22, 1824-29 '52. (MLRA 5:11)
(CA 47 no.18:9306 '53)

1. S.M.Kirov Academy of Forestry.

TISHCHENKO, D.; SHEYNA, S.

New type of terpene conversions. Part 15. Action of chlorine upon -fenchene. Zhur.ob.khim. 23 no.8:1405-1406 Ag '53. (MLRA 6:8)

1. Kafedra organicheskoy khimii Lesotekhnicheskoy akademii im. S.M.Kirova. (CA 47 no.22:12312 '53) (Fenchene)

TISHCHENKO, D.; SHEYNA, S.

Demethylation of methyl-phenols. Zhur.prikl.khim. 31 no.12: 1876-1879 D '58. (MIRA 12:2)

1. Lesotekhnicheskaya akademiya imeni S.M. Kirova.
(Cresol) (Methylation)

KHIMUNIN, S.D., kand. tekhn. nauk; SHARLYGINA, K.A., ml. nauchn. sotr.; VOLCHKOVA, A.T., st. inzh.; Prinimali uchastiye: POPOVA, N.V., inzh.; BYCHKOVA, A.A., inzh.; SKARBOVICHUK, T.G., inzh.; VIYRA, I.I., arkhitektor; SHEYNA, T.M., st. tekhnik

[Recommendations on redesigning and improving the living conditions of apartment houses of old towns] Rekomendatsii po pereplanirovke i povysheniiu blagoustroistva zhilykh domov staroi zastroiki gorodov. Leningrad, Stroiizdat, 1965. 131 p. (MIRA 18:8)

1. Akademiya kommunal'nogo khozyaystva. Leningradskiy nauchno-issledovatel'skiy institut. 2. Rukovoditel' laboratorii kapital'nogo remonta zhilykh domov Leningradskogo nauchno-issledovatel'skogo instituta Akademii kommunal'nogo khozyaystva im. K.D.Pamfilcva (for Khimunin).

KORSHAK, V.V.; KRONGAUZ, Ye.S.; SLADKOV, A.M.; SHEINA, V.Ye.; LUNEVA, L.K.

Coordination chain polymers. Part 1: Preparation of polymers of bis-(β-diketones) and metals. Vysokom.soed. 1 no.12: 1764-1771 D '59. (MIRA 13:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Ketones) (Organometallic compounds) (Polymers)

83874

S/190/60/002/005/004/015
B004/B067

15.8114 also 2209
11.2219

AUTHORS: Korshak, V. V., Krongauz, Ye. S., Sheyna, V. Ye.

TITLE: Investigation in the Field of Coordination Polymers. IV. Production of Polymers on the Basis of Aromatic Bis-(β-diketones) With Metals

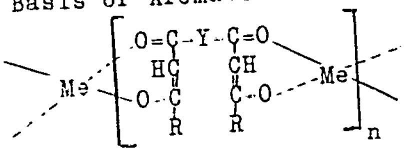
PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 5, pp. 662-672

TEXT: The authors describe the synthesis of bis-(β-diketones) with: 1) two directly connected benzene rings: 4,4'-bis-(acetoacetyl)diphenyl (1); 2) benzene rings separated by an oxygen atom: 4,4'-bis-(acetoacetyl)diphenyloxide(2); 3) benzene rings separated by a methylene group: 4,4'-bis-(acetoacetyl)diphenylmethane (3); 4) a single benzene ring and ramified structure: β,β,β',β'-tetraacetyldiethylbenzene (4); and 5) the bis-(β-diketone)of isophthalyldiacetophenone (5), which is isomeric to the terephthalyldiacetophenone (6) produced earlier. Coordination polymers with the following structure were obtained from these compounds:

83814

S/190/60/002/005/004/015
B004/B067

Investigation in the Field of Coordination Polymers. IV. Production of Polymers on the Basis of Aromatic Bis-(β-diketones) With Metals



R = $-C_6H_5$, $-CH_3$; Y = $-C_6H_4-$, $-CH_2C_6H_4CH_2-$, $-C_6H_4C_6H_4-$; $-C_6H_4OC_6H_4-$, $-C_6H_4CH_2C_6H_4-$.

The Claisen reaction which the authors used at the beginning gave only poor yields of diketones (5%). Proceeding from Ref. 2 the authors developed a method of direct acetoacetylation of compounds containing several benzene rings by means of acetic anhydride and in the presence of boron trifluoride with a 20% yield. The reaction equation is written down for diphenyl oxide:

$$C_6H_5-O-C_6H_5 + (CH_3CO)_2O \xrightarrow{BF_3} CH_3CO-C_6H_4-O-C_6H_4-COCH_3 \xrightarrow[BF_3]{(CH_3CO)_2C}$$

$$\longrightarrow CH_3COCH_2CO-C_6H_4-O-C_6H_4-COCH_2COCH_3.$$

Thus, compounds (2) and (3) were obtained. (1) could not be produced in the same manner. The

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S/190/60/002/005/004/015
B004/B067

Investigation in the Field of Coordination
Polymers. IV. Production of Polymers on the
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β-diketone of diphenyl was formed: $C_6H_5-C_6H_4-COCH_2-COCH_3$. (1) was synthesized according to Friedel-Crafts, (4) from xylylenedibromide and sodium acetyl acetonate. (5) and (6) were obtained by a method described in Ref. 1. By reacting alcoholic solutions of acetates of bivalent metals (Be, Cu, Ni, Co, Zn, Cd, Mn) with these bis-(β-diketones), or by heating the bis-(β-diketones) with the acetylacetonates of these metals at a stoichiometric ratio in the vacuum to 200 - 250°C, the coordination chain polymers were obtained, whose properties are compiled in Tables 1-6. These are colored powders, partly insoluble, and partly soluble in few organic solvents. Fig. 1 shows the thermomechanical curve for (2), Fig. 2 that for (4). These curves are characteristic of crystalline polymers. The molecular weight of the polymers was between 1000-2000. The authors found that the following rules govern the behavior of these polymers: With increasing content of phenyl groups, thermostability increases while solubility decreases. Solubility and meltability decrease when the ionic radius of the metal deviates too strongly from the radius of the chain-forming atoms. Beryllium compounds showed the highest and

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copper compounds the lowest solubility. Thermostability, however, decreases in the series Cu > Be > Ni > Co > Zn > Mn > Cd. There are 2 figures, 6 tables, and 7 references: 2 Soviet, 4 US, and 2 German.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy (Institute of Elemental-organic Compounds)

SUBMITTED: January 9, 1960

Card 4/4

SHEINA, Ye.A.

STROGANOVA, N.S., kand. biol. nauk; SHEINA, Ye.A.

Nutrition and growth of the sturgeon Acipenser stellatus in aquariums and basins. Sbor. trud. Mosk. zoop. no.1:119-131 '56.
(Sturgeons) (Fish culture) (Aquariums) (MIRA 10:11)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

2

A new apparatus for obtaining hydrosols by Bredig's method. S. G. Mokrushin and Z. G. Sheina. *Colloid J.* (U. S. S. R.) 3, 433-7(1937).—In a modified Bredig's app. for the production of a hydrosol by means of an elec. arc, the lower electrode consists of a horizontal plate of a metal to be dispersed and the upper electrode consists of a vertical rod of the same metal vibrating in a vertical direction. Very good results were obtained with this app. with Ag, Pt, Cd and other metals. S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

2

Experimental investigations on laminar systems. Electrophoresis of thin films of metal sulfides and metal hydrates on the surface of water and solutions. S. G. Mokrushin and Z. G. Sheina. *Colloid J.* (U. S. S. R.) 5, 707-15(1939).—Islets of thin films of CuS, As_2S_3, Sb_2S_3, Bi_2S_3, PbS, ZnS, Ag_2S, $Al(OH)_3$, $Fe(OH)_3$, $Zn(OH)_2$, or $Cu(OH)_2$, particles of paraffin wax, stearic acid, S, Al, or Mg, or droplets of petroleum jelly were placed on a water surface inside a paraffin wax ring, and Pt electrodes inserted outside the ring. The particles moved to one of the electrodes but neither the direction nor the rate of movement was const. No allowance for the movement of water was made.

J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION [illegible] April 1947

USSR/Emulsifying Agents
Chemistry - Emulsions

"Experimental Study of Laminar Systems, XV. Thin Films of Sulfides of Metals as Emulsifiers," S. G. Mokrooshin, Z. [illegible] Sheina, Laboratory of Colloidal Chemistry of the Urals State University imeni A. M. Gor'kiy, Sverdlovsk, 5 pp

"Kolloidnyy Zhurnal" Vol IX, No 4

Brief discussion with three tables of chemical analysis showing that dispersed films of sulfides of copper, lead, and zinc can serve as good emulsifiers for emulsions of the type V/M and, with the addition of alkali, for emulsions of the type M/V. Submitted 4 Jan. 1947

Laboratory worker L. [illegible] Zykov and graduate students F. A. Gorniykh and Ye. [illegible] Berezina assisted in the experiments.

PA 17T82

SHEINA, Z. G.

USSR/Mining - Underground Fires, Mine Safety

Jul 52

"Prevention of Endogenous Fires in Copper-Pyrite Mines," A. A. Ivanov, K. M. Charkviani, N. P. Diyev, K. V. Kochnev, Z. G. Sheina, Ye. F. Iordan, F. N. Pavlov

"Iz Ak Nauk, Otdel Tekh Nauk" No 7, pp 1037-1044

Presents results of works conducted since 1947 by a group of Soviet investigators studying causes of underground fires and establishing preventive measures. Discusses selection of mining system safe in respect to fires, silting as basic preventive measures against underground fires, and ventilation for cooling ore rocks and for maintaining normal temp conditions in mines. Submitted by Acad A. A. Skochinskiy 1 Apr 52.

PA 228T99

SHEYNA, Z G

USSR.

Experimental study of laminar systems. XXI. Effect of electrolytes on the formation of ultrafine films on the surface of colloidal solutions of titanium and thorium hydroxides. S. G. Mokrushin and Z. G. Sheina. *Colloid J.* (U.S.S.R.) 16, 361–4(1954)(Engl. translation).—See *C.A.* 49, 2815*i*. H. L. H.

SHEYNA, Z.G.

MOKRUSHIN, S.G.; SHEYNA, Z.G.

Experimental studies of laminar systems. Part 21. Effect of electrolytes on the formation of ultrathin films on the surface of colloidal solutions of titanium and thorium hydroxides. Koll. zhur. 16 no.5:376-380 S-O '54. (MLRA 7:11)

(Colloids) (Films (Chemistry)) (Electrolytes) (Hydroxides)

SHEINA, Z.G., kandidat khimicheskikh nauk.

Study and selection of wetting compounds for quartz sandstone in the Kizel Coal Basin. Sbor. rab. po sil. no.1:26-40 '56. (MLRA 10:2)

1. Gorno-Geologicheskiy institut Ural'skogo filiala Akademii nauk SSSR.
(KIZEL BASIN--MINE DUST) (WETTING AGENTS)

15-57-8-11888

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8, pp 284-285 (USSR)

AUTHORS: Sheina, Z. G., Fedorova, G. G.

TITLE: Control of Concentration of Various Wetting Agents (Metod kontrolya kontsentratsii razlichnykh smachivateley)

PERIODICAL: Sb. rabot po silikozu. AN SSSR, Nr 1, 1956, pp 50-56

ABSTRACT: Washing and the use of dust wetting additives during drilling of blast holes are the preventive methods used to combat silicosis. The methods for controlling the concentration of wetting agents (measurement of surface tension, film flotation) used in laboratory practice are unsuitable for wide use under operational conditions. The authors propose a simpler method which is a variation of the analogous method of the NIOPIK (Scientific Research Institute of Organic Semifinished

Card 1/3

15-57-8-11888

Control of Concentration of Various Wetting Agents (Cont.)

Products, and Dies) imeni Voroshilov Institute and is based on determination of the rate of wetting of the coal dust. Fifty ml of a solution of the wetting agent is poured into a glass tube 60 mm to 80 mm high, with a diameter of 30 mm to 40 mm. A weighed amount (0.1 g) of coal dust-ethanol mixture is poured in a small heap on the surface of the liquid. The time required for complete wetting of the weighed amount, that is, the time required for the coal dust to sink into the solution, is determined. The variation in temperature has a great effect on the value of the surface tension of the water and on the rate of wetting the coal. Thus, for example, the time of wetting of a weighed amount of coal at a temperature of 10° C amounts to 58 sec for the DB wetting agent; with an increase in temperature to 40° C, it decreases to 27 sec. The DB wetting agent is found to be most effective, according to experimental data obtained in testing this method. Positive results were also obtained in wetting dust with alkaline sulfite cellulose (STsShch), which successfully replaces the wetting agents in a 1 percent concentration.
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15-57-8-11888

Control of Concentration of Various Wetting Agents (Cont.)

The time for wetting a standard weighed amount of coal, using a mixture of 0.05 percent DB and 0.25 percent STsShch, amounts to 30 sec. This rapid method for control of the concentration of a wetting agent insures effective dust interception. It is possible to establish the relationship between the kinetics of wetting and the concentration of the wetting agent by measuring the rate of wetting of standard coal dust. The proposed method also permits analysis of new wetting agents. Coal with the weakest tendency to oxidation should be used as the standard coal dust.

Card 3/3

I. D. Gol'denberg

~~SHEYNA, Z. G.~~

SHEYNA

[illegible] limonites [illegible]

[illegible] 35 [illegible] The [illegible] deposits [illegible]

[illegible] similar to that in soils and [illegible] a study of these [illegible] cell of Pauli, with 3 chambers. The cations and anions in the electrode chambers were analyzed and examd. by spectrometry. The limonite of the ore deposits showed adsorbed cations in the amts. of 2.92 to 7.84 meq./100 g. while sedimentary limonites showed only 0.38 to 0.70 meq./100 g. The soln. in the cathode chamber of the ore deposit limonites showed enrichment in Zn, Mn, Cu, Pb, and Ag, while Ti and V were observed in marked amounts in the central cell, having undergone no change in their binding. Sedimentary limonites showed cathodic enrichment in Be, Ni, Co, and Cr. The central cell again contained Ti and V unchanged. The electrodialysis method makes, therefore, a reliable distinction of limonites of both [illegible] possible, a fact of great importance for [illegible] W. Eitel

SIDOROV, I.N., kand. tekhn. nauk; FEDOROVA, G.G.; SHEINA, Z.G.

Prevention of endogenous fires in Ural coal mines. Trudy Gor.-geol. inst. UFAN SSSR no.31:97-122 '58. (MIRA 12:9)
(Ural Mountain region--Mine fires)

FEDOROVA, G.G.; SHEYNA, Z.G.

Colloidal properties of Chelyabinsk clays and the evaluation of their suitability for silting operations. Trudy Gor.-geol.inst. UFAN SSSR no.41:119-132 '59. (MIRA 13:5)

(Chelyabinsk Province--Clay)
(Coal mines and mining--Fires and fire prevention)

SHEYNBAUM, E.M., provizor; GAVRILYUK, Ye.Ya.

"Farmacia" [in Rumanian]. Nos.1-5, 1956. and 1-3, 1957. Reviewed by E.M.Sheinbaum. E.IA.Gavriliuk. Apt.delo 7 no.1:80-86 Ja-F '58.
(RUMANIA--PHARMACY--PERIODICALS) (MIRA 11:3)

SHEYNBAUM, E.M., provizor

"Manual of pharmaceutical technology" by N.Stanciu, V.Stănescu. Reviewed by E.M.Sheinbaum. Apt.delo 8 no.3:89-90 My-Je '59. (MIRA 12:8)

(PHARMACY) (STANCIU, N.) (STANESCU, V.)

SHEYNBAUM, E.M.

"Pharmaceutical preparations." Reviewed by E.M.Sheinbaum. Med. prom. SSSR 14 no.12:56 D '60. (MIRA 13:12)
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GUSAKOVA, Ye.I.; SHEYNBAUM, E.M.

"Droplet analysis in the drugstore" by H.Beral, E.Demitrescu, R.Vasiliev. Reviewed by E.I.Gusakova, E.M.Sheinbaum. Apt. delo 10 no.3:89-90 My-Je '61. (MIRA 14:7)
(PHARMACY) (BERAL, H.) (DEMITRESCU, E.)
(VASILIEV, R.)

UZDENIKOV, A.; SHEYNBAUM, E.M.

Abstracts. Apt. delo 11 no.1:82-83 Ja-F '62. (MIRA 15:4)
(PHARMACY--ABSTRACTS)

SHEYNBAUM~~, R.M.; CH~~ERNYSHEVA, P.I. KOVTUNOVA, N.Ya.; YAKHNIS, Z.E.; STAKHO, A.S.; PONOMAREVA, T.D.

Duration of the usefulness of sterile solutions prepared in the pharmacy. Apt. delo 11 no.1:55-56 Ja-F '62. (MIRA 15:4)

1. Apteka Sochinskoy gorodskoy bol'nitsy No.2 i bakteriologicheskaya Laboratoriya Sochinskoy sanitarno-epidemiologicheskoy stantsii.
(SOLUTIONS (PHARMACY))

SHEYNBAUM, E.M.

"Pharmaceutical manual. Part I. Elements of pharmaceutical technology" by N.Stanciu, P.Ionescu-Stoian and E.Savopol. Reviewed by E.M.Sheinbaum. Apt. delo 11 no.1:88-89 Ja-F '62.
(MIRA 15:4)

(PHARMACY) (STANCIU, N.) (IONESCU-STOIAN, P.)
(SAVOPOL, E.)

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"Lecture course on pharmaceutical incompatibility" by N.Stanciu, P.Ionescu-Stoian and A.Opari. Reviewed by E.M.Sheinbaum. Apt. delo 11 no.1:89-90 Ja-F '62. (MIRA 15:4)

(INCOMPATIBLES (PHARMACY))

(STANCIU, N.) (IONESCU-STOIAN, P.) (OPARI, A.)